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(56) Documents Cited

GB 2077975 A EP 0462013 A2 EP 0090965 A

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(54) **Personal Organiser with Map feature.**

(57) A map includes bar code symbols and can be used with an electronic organiser which has a bar-code reader, so that a visitor to a location can identify the local facilities.

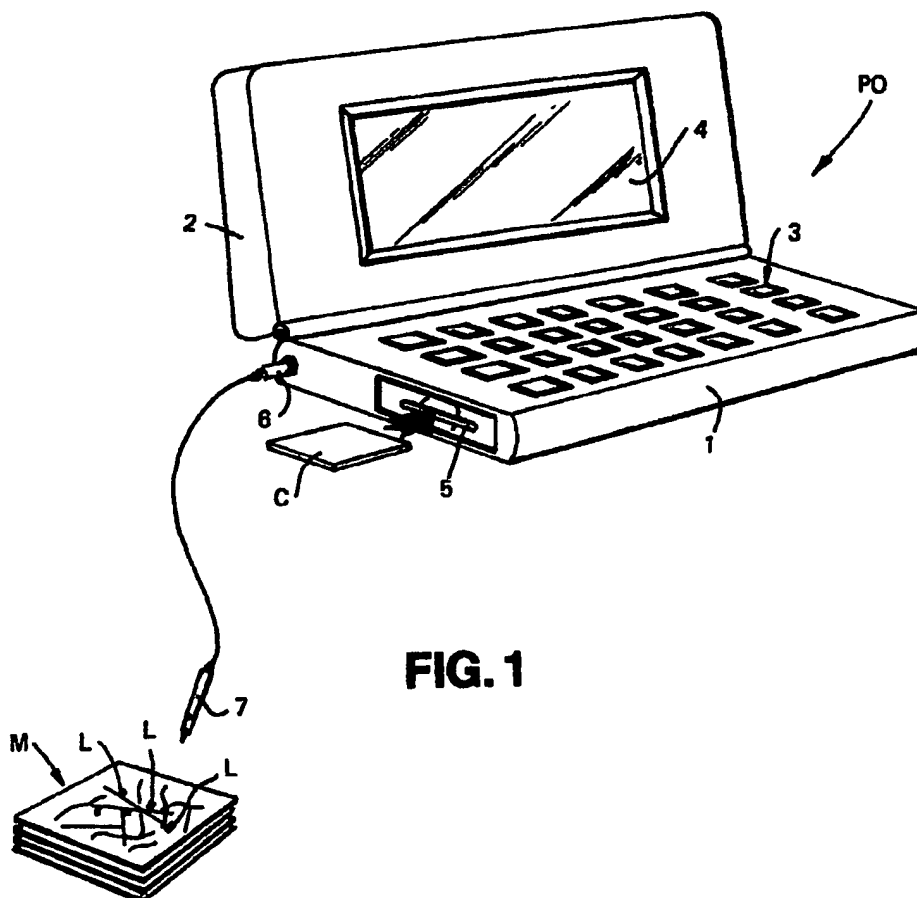


FIG. 1

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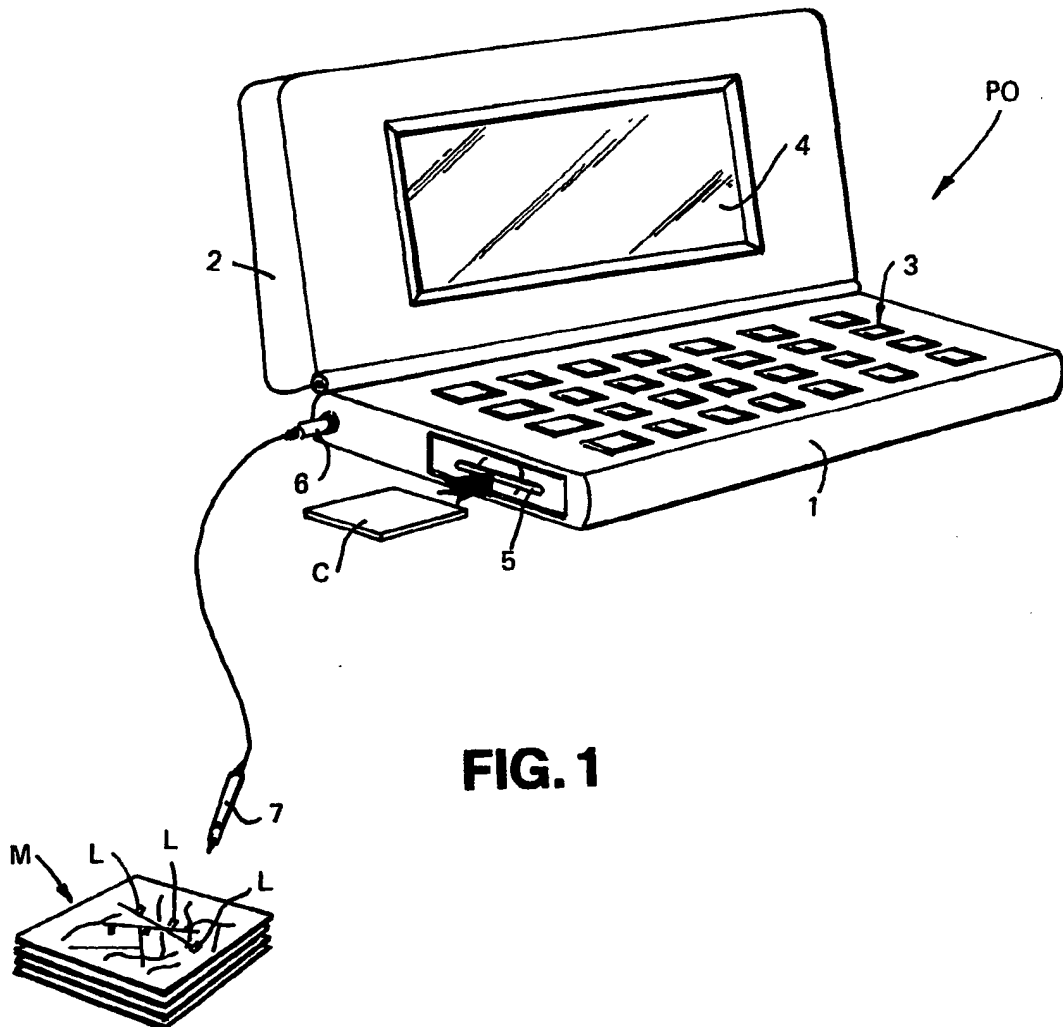
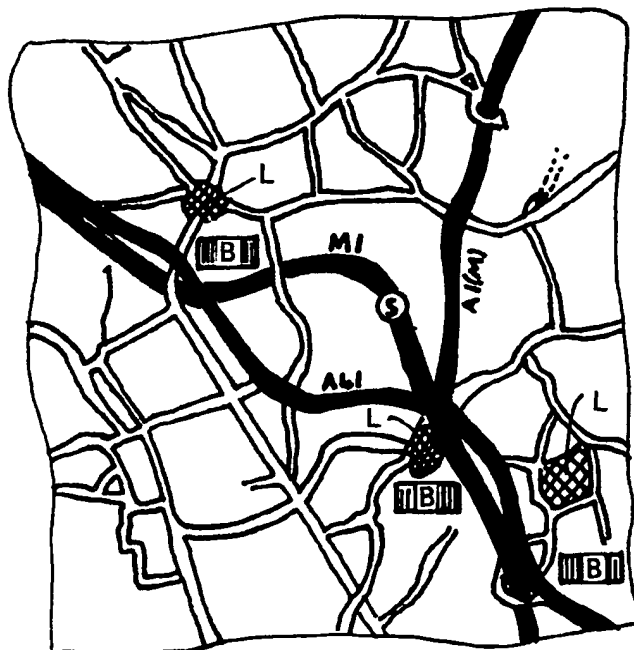


FIG. 1

FIG. 2



PORTABLE COMPUTER MEANS

The invention relates to portable computer means and more particularly to an electronic personal organiser.

It is one object of the invention to provide a so-called personal organiser adapted to read bar codes so as to allow the user to use information associated with a map.

According to the invention in one aspect there is provided an electronic organiser comprising memory means, connectable to a keyboard, display means and a power source characterised by the presence of a socket to receive a device for reading bar codes, the device being connectable into the memory means and in that the memory means includes data appropriate to locations on maps, the locations being identified by bar code symbols.

In a specific embodiment the organiser is a portable electronic organiser comprising memory means, alphanumeric keyboard, display means and a power source, characterised by the presence of a socket to receive a device for reading bar codes and in that the memory means includes data appropriate to locations on maps, the locations being identified by bar code symbols.

The data appropriate to locations on maps may be provided, for example by a data storage card to be inserted into an appropriate socket in the organiser or by a hard disc accommodated in or connectable to the organiser. Where data storage cards are used, a selection of cards may be provided, each containing a different type of information.

Bar codes comprise bar and space symbols with the identification of whether each symbol is a bar or space and the distance in between providing the information content of the code. The code may be the UPC (Universal product code), EAN (the European equivalent of the UPC code), Code 39, the "I2 of 5", a "Codebar", "Code 93", "Code 11", "Code 128" or the like to emit light or other radiation to read the code. The device to read the code may be a hand held scanner, light pen, light wand or the like. The scanner device may operate at a frequency of from about 40 MHz to 8KHz, preferably about 5MHz to about 9.76 KHz, because lower frequencies are appropriate to pens and wands. The device should operate in a range which provides accuracy with minimal power because being portable there is a limit to the power available. The reader device may be integrally formed with the organiser but preferably the device is separate so that it may have its own (rechargeable) power supply.

The invention also includes maps having locations identified by bar code symbols.

In order that the invention may be well understood it will now be described by way of example only with reference to the accompanying diagrammatic drawings in which

Figure 1 is a schematic diagram of an organiser and the associated cards and maps, and

Figure 2 is a portion of one map associated with the organiser and drawn to an enlarged scale

A personal organiser PO comprises two plate-like compartments 1, 2 hinged together. The base plate 1 includes the usual alphanumeric keyboard and control switches 3, and the top plate 2 houses a visual display screen 4. The plate 1 has a slot 5 in one side to receive a data storage card C. The plate 1 houses memory storage means and one or more electrical batteries and other usual components (not shown). According to the invention, the organiser PO also includes a socket 6 to receive a lead from a light bar code reader pen or wand 7. The organiser PO is supplied with a set of storage cards C, each of which has been loaded with information peculiar to a location on one of a set of maps M. The maps M are printed (or labelled) with bar codes B at each location L so that the user may by loading the respective card C into the organiser PO and using the pen 7 display the stored information. The information may be programmed according

to the requirements of the user; for example details of routes (most direct or scenic); local entertainment facilities such as tourist attractions with opening hours; restaurants, theatres; for the casual traveller; details of businesses or of customers for the commercial traveller; details of addresses of services e.g. hospitals, churches, fire services for say the police.

The information may be arranged to be sortable on a radius around the bar code. Thus it can be arranged to provide information around a particular area regardless of county boundaries, in contrast to conventional printed listings of information.

In use, the traveller places the card C appropriate to his start location on the selected map M in the slot 5. He then uses the pen 7 to read the data and to organise his day. (The memory capacity of the organiser PO will be arranged to store any added information he may want). Because the organiser includes the light pen and the map has bar codes the user can do these activities conveniently and avoids the need for a large collection of printed record cards. In that sense the maps are intelligent.

The invention is particularly useful for route planning. To find a route between two points, the light bar codes for the starting point is entered and then the light bar code for the destination. The information can be arranged to detail the required journey with, for example, all the left and right turns indicated. By

inputting the same two codes in the reverse order, the left and right turns will be reversed to give the correct instructions for the return journey. This is very advantageous compared with traditional map route-finding, particularly for North-South journeys since conventional map pages are usually arranged West to East, requiring multiple page turnings.

The invention is not limited to the embodiment shown. For example, the light pen may be provided with its own power source; and the personal organiser may be provided with extra sockets for down loading of data, printing etc. The map need not show locations on land but could show features of relevance to sailors, pilots and the like. The bar codes need not be printed alongside each location but may be placed in a box at an edge of the map. In this latter embodiment, light bar codes at, say, the foot of the page can enable the user to select items of interest, e.g. restaurants, golf clubs, sites of historical interest and so on subject only to the capacity of the memory available. Thus with a suitable hard disc, there is no need for a collection of data storage cards although the latter may be a more attractive commercial proposition in particular circumstances.

The system is versatile and the software incorporating the desired memory may be usable on any personal computer and used with an appropriate map at home or in the office.

The data can be loaded by disc, card, tape or CD. The lightbar codes may be colour coded.

CLAIMS

1. An electronic organiser comprising memory means connectable to a keyboard, display means and a power source characterised by the presence of a socket to receive a device for reading bar codes, the device being connectable into the memory means and in that the memory means includes data appropriate to locations on maps, the locations being identified by bar code symbols.
2. An electronic organiser according to Claim 1, which is a portable organiser having an alphanumeric keyboard, display means and a power source.
3. An electronic organiser according to Claim 1 or 2, in which the data appropriate to locations on maps is provided on data storage cards and the organiser includes a socket to receive a data storage card.
4. An electronic organiser according to Claim 1 or 2, in which the data appropriate to locations on maps is provided on a hard disc accommodated in or connectable to the organiser.
5. An electronic organiser to any preceding Claim, in which the

device to read the bar codes is a hand-held sensor, light pen or light wand.

6. An electronic organiser according to Claim 5, in which the scanner, pen or wand is provided with its own power source.
7. An electronic organiser according to Claim 6, in which the power source is rechargeable.
8. An electronic organiser according to Claim 5 or 6, in which the device to read the bar codes is a scanner operating at a frequency of from about 40 MHz to about 8KHz.
9. An electronic organiser according to any preceding Claims, which includes one or more sockets for downloading of data.
10. A map having data relating to locations on the map identified by bar code symbols on the map.
11. A map according to Claim 10, in which the bar code signals correspond to data appropriate to the locations and stored in electronic memory means.
12. A map according to Claim 10 or 11, in which the data is sortable on a radius around the bar code location on the map.

13. A map according to Claim 10, 11 or 12, in which the data is arranged to provide a route between a chosen starting point and final destination.
14. A map according to any one of Claims 10 to 13, in which the bar codes are positioned at an edge of the map and grouped to provide different categories of information.
15. An electronic organiser substantially as hereinbefore described with reference to and is shown in the accompanying drawings.

Patents Act 1977
Examiner's report to the Comptroller under Section 17
(The Search report)

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Relevant Technical Fields

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(ii) Int Cl (Ed.5) GO6F 3/00, 3/03

Search Examiner
MR S J PROBERT

Date of completion of Search
25 MARCH 1994

Databases (see below)

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

(ii) ONLINE DATABASES: WPI, INSPEC

Documents considered relevant following a search in respect of Claims :-
1-9,15

Categories of documents

- | | |
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| <p>X: Document indicating lack of novelty or of inventive step.</p> <p>Y: Document indicating lack of inventive step if combined with one or more other documents of the same category.</p> <p>A: Document indicating technological background and/or state of the art.</p> | <p>P: Document published on or after the declared priority date but before the filing date of the present application.</p> <p>E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.</p> <p>&: Member of the same patent family; corresponding document.</p> |
|--|---|

Category	Identity of document and relevant passages	Relevant to claim(s)
X	GB 2077975 A (G A ROBINSON) see whole document	1-15
A	EP 0462013 A2 (SONY) see abstract	1-9,15
A	EP 0090965 A (SIEMENS) see abstract	1-15

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).